

WHAT IS CLAIMED IS:

1. A variable-gap fluid dynamic bearing motor assembly, the assembly comprising:
a hub configured to rotate about a rotational axis and to support at least one disc;
a first member attached to the hub and configured to rotate about the rotational axis;
a second member;
a first fluid dynamic journal bearing disposed between the first member and the second member and having a first bearing gap;
a second fluid dynamic journal bearing disposed between the first member and the second member and having a second bearing gap, the second bearing gap being larger than the first bearing gap; and
bearing fluid disposed within the first fluid dynamic journal bearing and the second fluid dynamic journal bearing to support the relative rotation of the first member and the second member.
2. The assembly of claim 1, further comprising at least one disc coupled to the hub, the at least one disc, the hub and the first member being part of a rotational assembly.
3. The assembly of claim 2, wherein a center of gravity of the rotational assembly is disposed closer to the first fluid dynamic journal bearing than to the second fluid dynamic journal bearing.

4. The assembly of claim 1, wherein sizes of the first bearing gap and the second bearing gap are selected to optimize power consumption of the first fluid dynamic journal bearing and the second fluid dynamic journal bearing relative to operational vibration of the assembly.

5. The assembly of claim 1, wherein sizes of the first bearing gap and the second bearing gap are selected to optimize power consumption of the first fluid dynamic journal bearing and the second fluid dynamic journal bearing relative to non-repetitive run-out of the assembly.

6. The assembly of claim 1, wherein the second member is configured to remain stationary.

7. The assembly of claim 6, wherein the first member comprises a shaft and the second member comprises a sleeve.

8. The assembly of claim 6, wherein the first member comprises a sleeve and the second member comprises a shaft.

9. The assembly of claim 1, wherein the assembly is disposed within an electronic device.

10. The assembly of claim 9, wherein the electronic device is a disc drive.
11. A variable-gap fluid dynamic bearing motor assembly, the assembly comprising:
 - a hub configured to rotate about a rotational axis and to support at least one disc;
 - a first member attached to the hub and configured to rotate about the rotational axis;
 - a second member;
 - a fluid dynamic journal bearing disposed between the first member and the second member and having a first bearing gap and a second bearing gap, the second bearing gap being larger than the first bearing gap; and
 - bearing fluid disposed within the fluid dynamic journal bearing to support the relative rotation of the first member and the second member.
12. The assembly of claim 11, further comprising at least one disc coupled to the hub, the at least one disc, the hub and the first member being part of a rotational assembly.
13. The assembly of claim 12, wherein a center of gravity of the rotational assembly is disposed closer to the first bearing gap than to the second bearing gap.
14. The assembly of claim 11, wherein sizes of the first bearing gap and the second bearing gap are selected to optimize power consumption of the fluid dynamic journal bearing relative to operational vibration of the assembly.

15. The assembly of claim 11, wherein sizes of the first bearing gap and the second bearing gap are selected to optimize power consumption of the fluid dynamic journal bearing relative to non-repetitive run-out of the assembly.

16. The assembly of claim 11, wherein the second member is configured to remain stationary.

17. The assembly of claim 16, wherein the first member comprises a shaft and the second member comprises a sleeve.

18. The assembly of claim 16, wherein the first member comprises a sleeve and the second member comprises a shaft.

19. The assembly of claim 11, wherein the assembly is disposed within an electronic device.

20. The assembly of claim 19, wherein the electronic device is a disc drive.